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25X1

TOP SECRET

Must

P 282338Z
FM NPIC

OUT 52533

30 DEC 1963

1963 DEC 29 01 03Z

PRIORITY

AFSSO USAFE
AFSSO PACAF

CNO

OPCEN
YWQLAZC/AFSSO SAC
YWQLAZC/AFSSO ACIC
YWQLAZC/AFSSO FTD
ZEM
T O P S E C R E T

SSOS PASS TO APPROPRIATE TCOS. CITE NPIC 1632.

25X1

Grace (File)

1

THE FOLLOWING INFORMATION IS FROM THE NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER. SUBJECT: CAMERA INFORMATION FOR MISSION 9062.

A. THIS PHOTOGRAPHY INVOLVES THE USE OF EIGHT CAMERAS: TWO MAIN CAMERAS, FOUR HORIZON CAMERAS, A STELLAR CAMERA AND AN INDEX CAMERA.

B. OPERATIONAL FOCAL LENGTHS

	FWD UNIT (MM)	AFT UNIT (MM)
(1) MAIN LENS	609.602	609.602
(2) PORT HORIZON LENS	54.68	55.08
(3) STARBOARD HORIZON LENS	54.98	54.93
(4) STELLAR CAMERA	NOT AVAILABLE	
(5) INDEX CAMERA	NOT AVAILABLE	

C. LENS DISTORTION (PIN CUSHION)

	FWD UNIT	AFT UNIT
(1) MAIN LENS		

GROUP 1
Excluded from automatic downgrading and declassification

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(DEGREES)	(MM)	(MM)
3	Ø	Ø
2	Ø	Ø
1	Ø	Ø
Ø	Ø	Ø

(2) HORIZON CAMERAS

	FWD		AFT	
	PORT	STARBOARD	PORT	STARBOARD
(RADIAL) 10 DEGREES	.001MM	.003MM	.000MM	.005MM
20 DEGREES	.007MM	.009MM	.004MM	.018MM
(TANGENTIAL) MAX VECTOR	.003MM	.006MM	.008MM	.003MM

D. DEPRESSION ANGLES OF HORIZON CAMERAS RELATIVE TO NOMINAL MAIN CAMERA

	PORT	STARBOARD
FWD	15 DEGREES 09' 18"	15 DEGREES 49' 12"
AFT	15 DEGREES 39' 45"	15 DEGREES 55' 23"

E. CAMERA FILTER AND EXPOSURE DATA.

	MAIN	HORIZON	STELLAR	INDEX
FILTER	WRATTEN 21	WRATTEN 25	NONE	WRATTEN 21
APERTURE	F 3.5	SEE NOTE 1	F 1.9	F 4.5
SLIT WIDTH/ EXPOSURE	Ø.250 INCH	1/100 SEC	2 SEC	1/500 SEC
FILM	SO 132	SO 132	SO 102	SO 130

NOTE 1: BOTH THE MASTER AND SLAVE STARBOARD HORIZON CAMERAS USED

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A F 8.Ø APERTURE. BOTH THE MASTER AND SLAVE PORT HORIZON CAMERAS USED A F 6.8 APERTURE.

F. RESOLUTION CAPABILITIES.

(1) (L/MM AVG)	MAIN	PORT HORIZON	STARBOARD HORIZON
FWD	191	101	103
AFT	189	93	112

(2) INDEX (L/MM AWAR) NOT AVAILABLE.

G. TIMING MARKS.

FREQUENCY MARKS WILL APPEAR ON THE FILM AT A RATE OF 200 CYCLES PER SECOND.

H. CALIBRATED ANGLES OF CAMERAS.

(1) CALIBRATED CONVERGENT ANGLE OF MAIN CAMERAS 29 DEGREES 51.9 MIN

(2) CALIBRATED ANGLE BETWEEN STELLAR & INDEX CAMERAS-NOT AVAILABLE

(3) STELLAR (LOC. OF P.P.)

(A) X EQUALS - NOT AVAILABLE

(B) Y EQUALS - NOT AVAILABLE

NOTE: VIEWING POSITIVE, EMULSION UP, PLUS "Y" IS IN DIRECTION OF FLIGHT AND PLUS "X" IS TO THE LEFT AND PERPENDICULAR TO DIRECTION OF FLIGHT.

(4) INDEX (LOC. OF P.P.)

(A) X EQUALS - NOT AVAILABLE

(B) Y EQUALS - NOT AVAILABLE

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NOTE: VIEWING POSITIVE, EMULSION UP, PLUS "X" IS IN DIRECTION OF FLIGHT AND MINUS "Y" IS TO THE RIGHT AND PERPENDICULAR TO DIRECTION OF FLIGHT.

I. IMAGE MOTION COMPENSATION DATA.

A. FMC PROGRAMMER REFERENCE LEVEL

(1) GROUND ANGULAR VELOCITY .0266 (RAD/SEC)

PASSES: USED ON ALL PASSES

B. FMC PROGRAMMER AMPLITUDE LEVEL

(1) GROUND ANGULAR VELOCITY .0136 (RAD/SEC)

PASSES: USED ON ALL PASSES

J. PROGRAM TIME DATA

PASS	CAMERA ON TIME (ZEBRA TIME) DAY	HOUR	MIN	SEC	PROGRAM ON TIME UP RAMP (SEC)	PROGRAM DURATION (SEC)
3D1	22	2	11	17	1635	194
4D1	22	3	43	34	1771	100
4D2	22	3	46	8	1925	94
5D1	22	5	13	15	1749	121
5D2	22	5	17	4	1978	109
7D1	22	8	10	35	1585	180
7D2	22	8	14	36	1826	151
8D1	22	9	43	38	1793	137

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18D1	23	Ø	4Ø	32	1639	11Ø
18D2	23	1	1	32	2898	137
19D1	23	2	9	34	1585	119
2ØD1	23	3	42	2Ø	1753	268
21D1	23	5	1Ø	48	1664	168
21D2	23	5	16	5	1981	126
22D1	23	6	4Ø	19	1641	234
23D1	23	8	14	8	1921	132
24D1	23	9	41	4	1743	165
24D2	23	9	45	4	1983	145
25D1	23	11	18	32	2189	1Ø5
34D1	24	Ø	39	35	1695	111
36D1	24	3	43	19	1927	167
37D1	24	5	9	47	1721	228
38D1	24	6	39	17	1695	153
39D1	24	8	8	19	1642	383
4ØD1	24	9	39	33	1721	247
5ØD1	25	Ø	39	44	1793	1Ø1
52D1	25	3	39	52	1815	138
53D1	25	5	Ø7	51	1701	132
54D1	25	6	37	17	1674	16Ø
55D1	25	8	Ø7	38	1703	132

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55D2	25	8	10	32	1877	152
56D1	25	9	38	25	1706	243
66D1	26	0	38	15	1819	100
67D1	26	2	08	08	1821	195
68D1	26	3	38	00	1819	140
69D1	26	5	6	24	1731	108
70D1	26	6	38	27	1862	209
71D1	26	8	4	49	1651	327
72D1	26	9	36	00	1732	267
74D1	26	12	44	44	2274	89

NOTE: DATA IS THE SAME FOR BOTH THE MASTER AND SLAVE UNITS.

K. TIME CORRELATION (MILLISECONDS)

PASS	SYSTEM TIME	CLOCK TIME	DIFFERENCE
10	42297.771	44695.427	
16	76186.271	78583.928	PLUS .001
26	128707.821	44705.476	MINUS .001
31	157015.554	73013.214	PLUS .004
41	209492.111	39089.768	PLUS .001
47	243498.016	73095.675	PLUS .003
57	295799.519	38997.170	MINUS .005
73	382227.211	39024.860	MINUS .007
79	416069.506	72867.170	MINUS .012

L. REMARKS: PLEASE NOTE THAT THERE HAS BEEN A CHANGE IN THE HORIZON

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OPTICS. THE NOMINAL FOCAL LENGTH IS NOW 55 MM INSTEAD OF 89 MM.

M. DOMESTIC DATA.

PASS	CAMERA ON TIME (ZEBRA TIME) DAY	HOUR	MIN	SEC	PROGRAM ON TIME UP RAMP (SEC)	PROGRAM DURATION (SEC)
14D1	22	18	46	30	1980	193
46D1	24	18	47	8	2212	89
47D1	24	20	16	11	2162	123
77D1	26	17	10	36	2051	145
79D1	26	20	10	54	2087	210

N. ENGINEERING DATA

PASS	CAMERA ON TIME (ZEBRA TIME) DAY	HOUR	MIN	SEC	PROGRAM ON TIME UP RAMP (SEC)	PROGRAM DURATION (SEC)
10A0	22	12	24	48	668	63
26A0	23	12	24	03	724	63
73A0	26	10	49	21	741	63

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/END OF MESSAGE/

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